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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,827	12/02/2003	Akira Ichihashi	524941/0020	5536

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EXAMINER

VO, ANH T N

ART UNIT PAPER NUMBER

2861

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SY

Office Action Summary

Application No.

10/726,827

Applicant(s)

ICHIHASHI ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/08/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL REJECTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/8/06 has been entered.

Claim Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-9 are rejected under 35 USC 103 (a) as being unpatentable over in view of Ujita et al (US 6,170,939) and Shinada et al (US 6,634,738).

Ujita et al discloses in Figures 3A-6 an ink cartridge comprising:

- a liquid accommodating chamber (309) for containing a liquid;
- a hollow part (322, Figure 9A) having a liquid supplying opening (321) into which a liquid supplying needle (315, Figure 5)) of a liquid ejecting apparatus (323) is inserted, while said liquid supplying opening communicating with said liquid accommodating chamber (309);
- a supply valve (311) contained in said hollow part (322), said supply valve arranged in order to close or open said insertion opening;

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- an urging member (312) for urging said supply valve (311) toward said opening, wherein said supply valve (311) comprises: a body part (306) having a circular cross-section and being substantially uniform of which a diameter is substantially the same as a diameter of said hollow part (322); and the height of the body part (306) is shorter than the diameter of the hollow part (322);
- said body part (306) having flat bottom;
- wherein a diameter of said body part (306) is greater than a diameter of said liquid supplying needle (315) inserted from said liquid supplying opening to allow said supply valve (311) to slide in said hollow part (322);
- wherein the body part (306) has a concave part for accepting a coil spring (312) of an urging member to urge the supply valve, see Figure 8; and
- wherein the diameter of the body part (306) is larger than the needle (320).

However, Ujita et al does not disclose that a seal member contained in said hollow part, said seal member having an insertion opening being in elastic contact with an external circumference of said liquid supplying needle (315), while said liquid supplying needle is inserted to said insertion opening; a length of the valve body in a sliding direction is greater than said diameter of said hollow part of said liquid supplying part; and a taper part formed at a first end of said body part (306) for engaging with said urging member and a distance between a taper part of a valve body.

Shinada et al. suggests in Figures 1A-1B and 4-6 an ink cartridge comprising a seal member (61) contained in said hollow part (4), said seal member (61) having an insertion opening (a hole, see column 7, lines 43-45) being in elastic contact with an external circumference of said liquid supplying needle (52), while said liquid supplying needle is inserted to said insertion opening (Figures 4-5, column 7, lines 41-45) for preventing the ink from leaking.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the seal in the cartridge of Ujita as suggested by Shinada et al for

the purpose of preventing the ink from leaking.

Although the length of the body part (306) of Ujita et al in a sliding direction is shorter than the diameter of the hollow part (322) and the body part (306) does not have a tapered end; however, a skilled artisan realizes that the size such as the length of the body part is determined by the size and shape of the ink cartridge and the coil so that the body part can be attached to the coil and can tightly open or close the ink opening without leakage. Thus, selecting the optimum length of the body part of Ujita et al as claimed is considered to a matter of a mechanical design expedient for an engineer. It would have been obvious to a person having skill in the art at the time the invention was made to select the size and shape of the body part (306) of Ujita et al as claimed for the purpose of accommodating with the size and shape of a predetermined ink cartridge.

Response to Applicant's Arguments

The applicant argues at page 6 of the amendment that the liquid supplying needle (315) of Ujita is not a part of a printer so that Ujita does not suggest at least the ink cartridge receiving the ink supply needle of a printer. The argument is not persuasive because it is based on the limitation which is not recited in the rejected claims. There is nothing stated in the rejected claims about this limitation.

The applicant's argues at page 7 that the height of the body part (306) of Ujita is shorter than the diameter of the hollow part (322) so that the supply valve can be easily tilted in the hollow part. The argument is not persuasive because selecting the optimum size and shape of the body part of Ujita as claimed for accommodating with the size and shape of a predetermined cartridge is considered to be a matter of a mechanical design expedient for an engineer and that would have been obvious at the time of the invention.

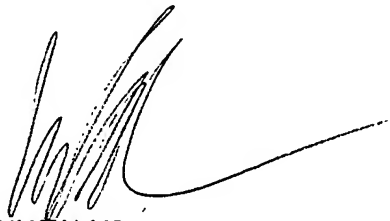
CONCLUSION

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262.

The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M..

The fax number of this Group 2861 is (571) 273-8300.



ANH T.N. VO
PRIMARY EXAMINER
November 09, 2006